



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/566,708

03/01/2006

Arnaud Helie

Q92887

8999

23373 7590 02/25/2008
SUGHRUE MION, PLLC
2100 PENNSYLVANIA AVENUE, N.W.
SUITE 800
WASHINGTON, DC 20037

EXAMINER

MCGRAW, TREVOR EDWIN

ART UNIT

PAPER NUMBER

3752

MAIL DATE

DELIVERY MODE

02/25/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/566,708	Applicant(s) HELIE ET AL.	
	Examiner Trevor E. McGraw	Art Unit 3752	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 February 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 February 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

Figure 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The drawings are further objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the orientation of the central spray chamber being between the spray orifice of the spray head and the insert must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure

is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

In addition to Replacement Sheets containing the corrected drawing figure(s), applicant is required to submit a marked-up copy of each Replacement Sheet including annotations indicating the changes made to the previous version. The marked-up copy must be clearly labeled as "Annotated Sheets" and must be presented in the amendment or remarks section that explains the change(s) to the drawings. See 37 CFR 1.121(d)(1). Failure to timely submit the proposed drawing and marked-up copy will result in the abandonment of the application.

Specification

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: Applicant's amendment to Claims 1 and 11 which adds the

limitations "and wherein the central spray chamber is between the spray orifice of the spray head and the insert" is not supported by the originally filed disclosure. Examiner cannot find any reference to these claim limitations and causes the specification to lack antecedence.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-16 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Examiner can find no recitation support for the new amended claim limitations for Claims 1 and 11 ("and wherein the central spray chamber is between the spray orifice of the spray head and the insert") within the specification. The specific orientation is not disclosed nor is it shown within the drawings (Figure 1 and 3). Appropriate clarification, correction or claim limitation cancellation is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 4, 8, 10, 11, 12, 13, 14 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Garrigou (US 3,625,437).

In regard to Claims 1, 8, 10, 11 and 12, Garrigou (3,625,437) teaches a fluid dispenser device that includes a fluid spray head manufactured from a common mold (Column 1, Lines 30-68) where the spray head (2) has an expulsion channel (13) with a spray orifice (14) and a spray profile (15,16,17) are formed in an end wall of the spray head (2) where non radial spray channels (17) are formed to the swirling chamber (Column 3, line 46-55) which opens to a spray chamber (16) that is disposed upstream of the spray orifice (14) where an insert (9) **forms an internal nozzle (see Figure 1 and 3 where 14 sits over 9 to form internal nozzle within the insert and forms a base surface for the spray profile. The internal nozzle that is created is configured along with the spray head with an upstream opening in the spray head) and is introduced through the inside of the spray head (2) being disposed in the expulsion channel (13) so as to form a cover for the spray profile (15,16,17) where the central axis (X) of the insert (9) is substantially identical to the central axis (Y) of the**

expulsion channel (13) (Figure 4) and where the expulsion channel (13) further has a centering means (19) for centering the insert (9) within the spray head (2) that is located in the expulsion channel (13) for centering the insert (9) where the centering means (19) is in close proximity to the spray profile (15,16,17) and **the central spray chamber (16) is between the spray orifice (14) of the spray head (2) and the insert (9).**

In regard to Claim 2, 13 and 14, Garrigou also teaches where the centering means (19) has at least one projection (see plurality of centering means 19 in Figure 4) that totals 4 projections which inherently includes more than 3 and less than 3 projections where the diameter of the inscribed circle (see Figure 4) defined by the projections (19-centering means) is substantially identical to the diameter of the insert (9) where the projections extend from an inside wall of the expulsion channel (13) and abut the insert (9) to substantially align the central axis of the insert (9) with the central axis of the expulsion channel (13).

In regard to Claim 4 and 16, Garrigou further teaches where the accesses of the expulsion channel (13) of the feed channel (17) are formed between the projections (Centering means projections 19-Figure 4).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

Art Unit: 3754

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3, 5-7, 9 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Garrigou (US 3,625,437) in view of Ennis, III (US 4,923,448).

In regard to claim 3 and 15, Garrigou as taught and described above teaches the claimed invention except for the expulsion channel (13) having three flat surfaces that are symmetrically arranged about the expulsion channel (13) where the flat surfaces cooperate with the insert (9) to center the insert (9) relative to the expulsion channel (13). Ennis, III (4,923,448) teaches that it is known to have an expulsion channel (52) that includes at least 3 flat surfaces (64) that are symmetrically placed about the expulsion channel (13). It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the flat surfaces (64) of the expulsion channel (52) as taught by Ennis, III to the expulsion channel (13) of Garrigou, in order to provide for a non cylindrical means for centering the insert (9) about the expulsion channel (13) so as to offer better tolerance control in offsetting the insert from the expulsion channel for minimizing the amount of space that a fluid can travel for atomization of spray with directional control through the spray openings.

In regard to claims 5-7, 9, Garrigou as taught above discloses the claimed invention except for the following: a central axis of the insert (9) being offset from the central axis of the expulsion channel (13) by a distance of less than 0.08 mm, and preferably less than 0.03 mm; a spray chamber having a diameter of 1 mm; a spray orifice having a diameter of 0.3 mm; and the standard deviation of the offset between the central axis of the insert relative to the central axis of the expulsion channel being

less than 0.05 mm and preferably less than 0.02 mm. It would have been an obvious matter of design choice to offset the central axis of the insert (9) from the central axis of the expulsion channel (13) by a distance of less than 0.08 mm, and preferably less than 0.03 mm as applicant has not disclosed that offsetting the central axis of the insert (9) from the central axis of the expulsion channel (13) by a distance of less than 0.08 mm, and preferably less than 0.03 mm solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with the central axis' not being offset from one another where offsetting the central axis' would provide a benefit that would ensure a spray would be directed past the projections through the expulsion channel.

It would have also been an obvious matter of design choice to provide for a spray chamber having a diameter of 1 mm and a spray orifice having a diameter of 0.3 mm as providing for such dimensions of the spray chamber and spray orifice as claimed are not disclosed by applicant so as to solve any stated problem or is for any particular purpose and appear that the invention would perform equally well if the dimensions of the spray chamber of 1 mm and the spray orifice of 0.3 mm were larger where the sizing of such benefits in atomization of a spray fluid through the restricted opening for directing the fluid.

It would have been a further obvious matter of design choice to provide for a standard deviation of less than 0.05 mm and preferably less than 0.02 mm for the offset between the central axis of the insert relative to the central axis of the expulsion channel since applicant has not disclosed that providing for a standard deviation of less than

0.05 mm and preferably less than 0.02 mm for the offset between the central axis of the insert relative to the central axis of the expulsion channel solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well without an offset between the insert and expulsion channel where offsetting the central axis' would provide a benefit that would ensure a spray would be directed past the projections through the expulsion channel.

Response to Arguments

Rejection under 35 USC § 102

Applicant's arguments filed 02/08/2007 have been fully considered but they are not persuasive. Applicant assertion that the insert (9) of Garrigou is not an internal nozzle is unfounded. A viewing of Figure 1, 2 and 4 clearly depict the insert (9) being internal and bounded by the spray head (2). The expulsion pressure that develops during actuation does not subject the insert (9) from being projected out of the spray head. The insert of Garrigou is not at further risk of expulsion due to being retained by the end wall of the spray head's end wall. The spray head (2) and insert (9) are also shown in Garrigou (see Figures 1 and 2) as separate elements and the spray orifice is in the spray head. Thus, Applicant's arguments are refuted in view of the revised office action (see above). Examiner maintains the rejection to Claims 1, 2, 4, 8, 10-14 and 16 held under 35 USC § 102 (b) to Garrigou (US 3,625,437).

Rejection under 35 USC § 103

Applicant's arguments filed 02/08/2007 have been fully considered but they are not persuasive. In view of the rejection of 35 USC § 102 (b), Examiner maintains the rejection of Claims 3, 5-7, 9 and 15.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Smith (US 5,992,765).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Trevor McGraw whose telephone number is (571) 272-7375. The examiner can normally be reached on Monday-Friday (2nd & 4th Friday Off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin Shaver can be reached on (571) 272-4720. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3754

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/T. E. M./
Examiner, Art Unit 3752

/Kevin P. Shaver/
Supervisory Patent Examiner, Art
Unit 3754

Trevor McGraw
Art Unit 3752

TEM